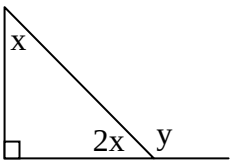
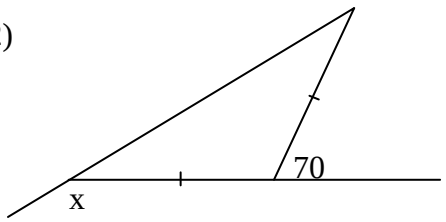
Triangles (I)

01) Find the magnitudes of the angles represented by the letters in each the figures.

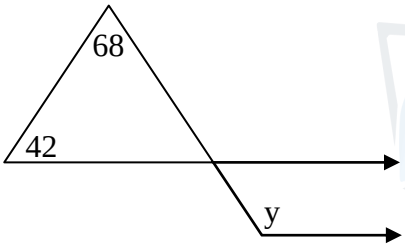
1)



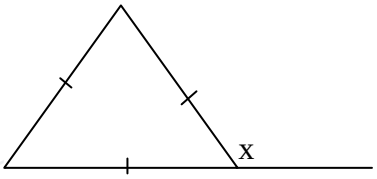
2)



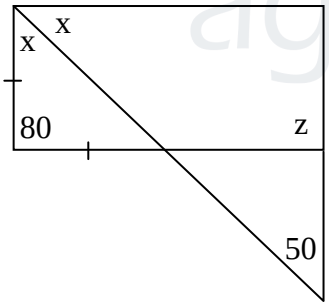
3)



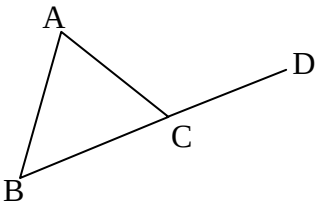
4)



5)



02) i) ABC is a triangle. The side BC of the triangle ABC has been produced up to D. Fill in the blanks.



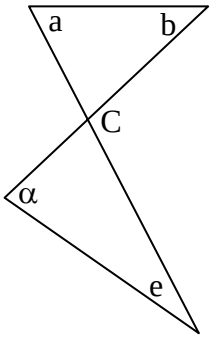
$B\hat{A}C + A\hat{C}B +$ ..... = 180° (.....)

$A\hat{C}D +$ ..... = 180° (Adjacent angles on a straight line)

$\therefore B\hat{A}C + A\hat{C}B +$ ..... = $A\hat{C}D +$ .....

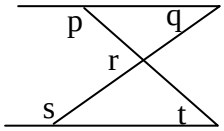
$B\hat{A}C + A\hat{C}B =$ .....

Write the theorem in words that you have proved above.



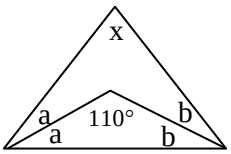
ii) Find the magnitudes of a in terms of b, d, e.

iii) Find the magnitude of s in terms of r, q, t

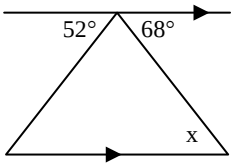


03) Find the value of x.

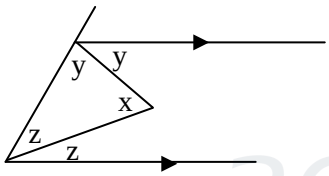
1)



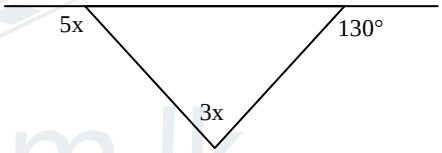
2)



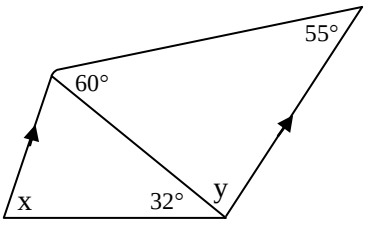
3)



4)



5)

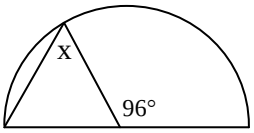


Find the values of x and y

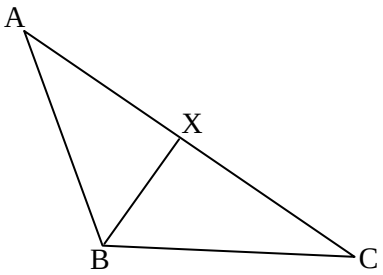
Triangles (II)

1) In the triangle XYZ, XY = YZ. The bisector of x meets the side YZ at R. show that,
   i) YR = RZ
   ii) XRY = 90°

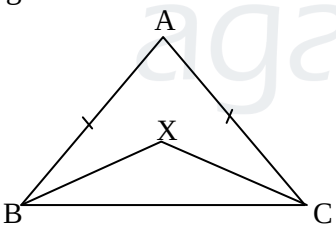
2) Find x.



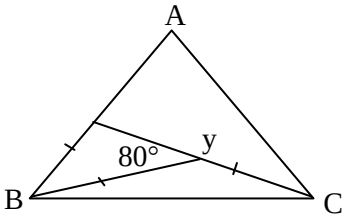
3) If AX = BX and BX = CX. Find $\hat{ABC}$.



4) ABC is an isosceles triangle. The bisectors of B and C meets at X. Show that BXC is an isosceles triangle.



5) i) Find $\hat{ABC}$
   ii) If AB = BC , Find $\hat{BAC}$



6) Find $\hat{ADB}$